FTTH ARC FUSION SPLICER
AD620

Read this instruction manual carefully before operating the equipment. Adhere to all safety instructions and warnings contained in this manual. Keep this manual in a safe place.

Content

§ 1. Introductions

It is a light weight, small and fast FTTH Fusion Splicer, which is designed to splice bare fiber, pigtail, patch cord, Optical fiber drop cable and make of SC,FC, LC connector on the spot by changing different fiber holders equipped. It is an ideal tool for the splicing of fiber network terminal, which is able to work in narrow and small room. Picture as follows:

§ 2. Specifications

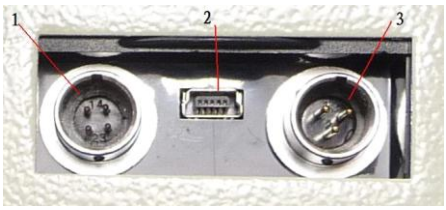
- **Applicable fibers**: SM, MM, DS, NZ-DS, G655,G657 and others
- **Fiber Diameter**：Cladding Diameter: 80-150 μm; Coating Diameter: 100~1000 μm
- **Splice Time**：8Sec.
- **Average splice loss**：0.01dB(MM)、0.02dB(SM)、0.04dB(DS/NZDS/G.655/G.657)
- **Return loss**: 60db
- **Tension test**: 2.0N
- **Protection sleeve length**: 25mm/40mm/50mm
- **Tube-heat Time**: 35 seconds
- **Splicing program**: Parameter modifiable
- **Alignment**: Core Alignment
- **Language**: English and Spanish (Other language optional)
- **Fiber Holder**：Replaceable and Suitable for the Splice of bare fiber ,pigtail ,patch cord, Optical fiber drop cable and SC,FC,LC connectors
- **Display**: Color 3.5 Inch TFT
- **Magnification**: 220
- **Interface**: USB/Uart, suitable for data download and software update
- **Splice Memory**: 10000
- **Operating Temp**: —15℃～+50℃
- **Storage Temp**: —40℃～+80℃
- **Window Protection**: Max. wind velocity of 15m/s
- **DC output**: 12V/2A Power for external heater, light or hot jacket stripper
- **Internal Battery**: 12V/6Ah, more than 120 times of continuous splices and heats
- **Dimension**: 120mm（L）*120mm（W）*115mm（H）
- **Weight**: 1.7KG (Include battery

§ 3. Description of operation units

Panel and Wind Protector

1：Wind Protector Magnet 2：Wind Protector 3：Electrode Cover Plate 4：Holder Base
5：Electrode 6：Key Board 7：light 8：Fiber Presser
9：Heating indicator light 10：Electrode Base 11：V-Groove 12：Alignment wheel

Description of side outlet box:



1: Charging input port 2: USB interface 3: DC output port

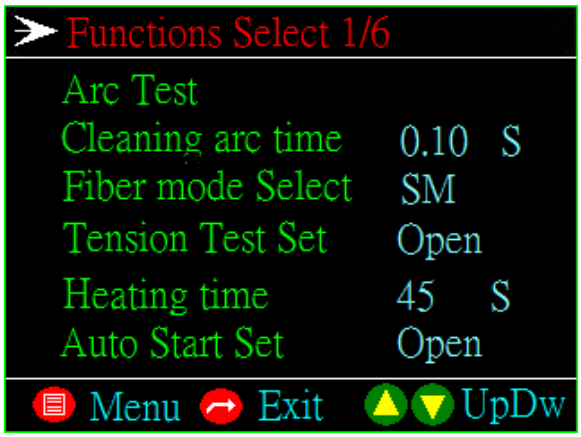
Key board:

 **:** Menu/Confirm  **:** Exit/Return  **:** Up Down/Modify

 : Splice/Re-arc  : Heating  : Reset  : Switch

§ 4. Description of Software Menu

There are 6 pages of the software menu: function selection, parameter set, maintenance set, record check and operation guide, description of subpage is as follows:



Arc Test: By doing Arc Test, it will judge whether the current arc power is suitable for the fiber and environment or not. Prepare fiber, place the fiber in the V-groove, choose arc test and then enter arc test program, and there will be a report after the arc test finished. If it shows arc strong or arc weak, the machine will automatically adjust arc power to make the following arc test to be arc ok.

Performing Arc test is a very important method to keep the machine at a well working condition. Arc test has to be performed in the following situations to avoid bad splice:

Replace of electrode

Dramatic change of temperature, humidity and air pressure

Different fibers to be spliced Several times use of Electrode Splicing db loss high without reason

Distortion of fiber image after splicing

Cleaning arc time: There is a transient arc for cleaning the fiber after fiber is pushed into the screen, it can be modified by this program.

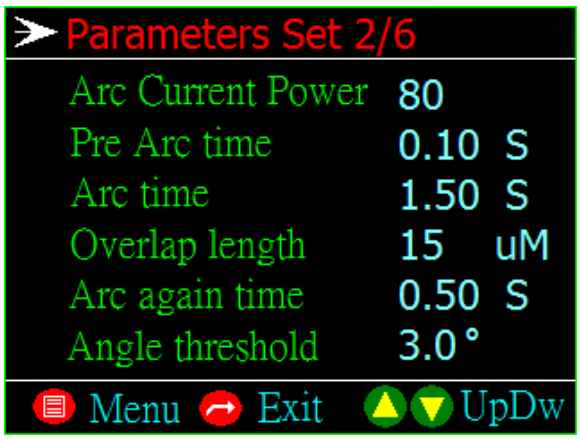
Splicing mode select: There are 7 modes can be selected:SM,MM50,MM62.5,DS,NZDS,ERBIUM,USER DEFINE, the specific parameter of the splicing parameter menu will be changed accordingly.

Tension Test set: After open the wind protector, the machine will tension test or not based on this set.

Heating time: Heater will heat according to the time set after pressing the heat button. Pressing heating button during heating operation, it will stop heat.

Auto start set: If this item is OPEN, after close the cover in stand by status, the machine will start splice automatically.

Parameter Set I;



Arc power: This parameter has the function over cleaning arc, pre arc, splicing arc, arc again, it can be set from 10-100.

Pre arc time: it is time between the start of arcing and start of forward.

Arc time: it is the continuous arc time after forward.

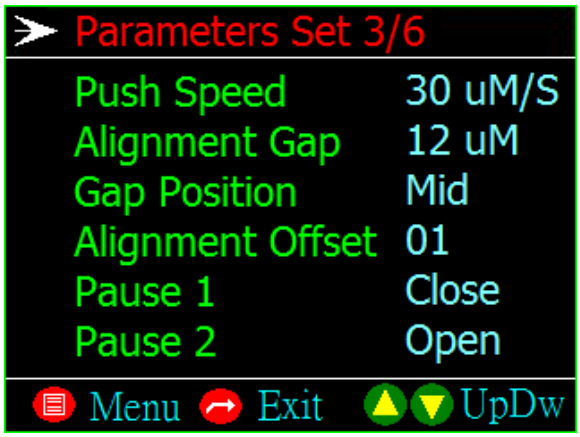
Overlap length: the forward length during arc process.

Arc again: After splicing, pressing arc button, the machine will arc again.

Angle threshold: During splicing process, if the fiber angle is greater than this parameter, PAUSE Ⅰ will be automatically started (Even if PAUSE Ⅰ is in off condition).

Note: Changing arc power and arc time has an affect on arc test result.

Parameter set Ⅱ:



Push speed: it decides motor speed and reset speed. **Alignment gap:** the distance between the end face of left and right fiber after aligned.

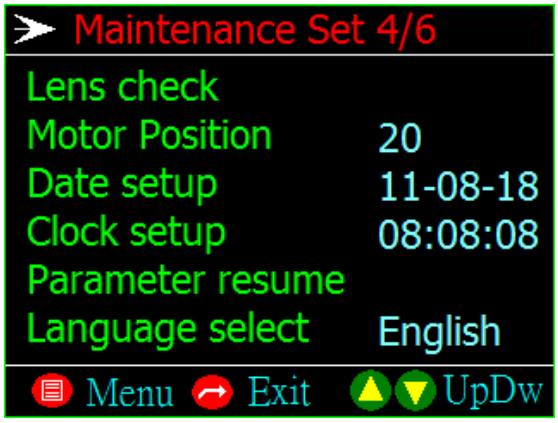
Gap position: the position of end face after fiber aligned, it is set in the mid of the screen usually. When the arc position is not in the mid of the screen (can be verified by the result of arc test), this parameter can be modified to make the gap position and arc position stay in same.

Alignment offset: If the alignment offset is greater than this parameter, PAUSE will be automatically started (Even if PAUSE is in off position).

PAUSE : If this item is open, during the process of splicing and arc test, the fiber will stop after pushed into screen.

PAUSE: If this item is open, during the process of splicing and arc test, the fiber will stop after alignment.

Maintenance Set:



Lens check: Check whether there is dust or saturation points in lens, by this check result, it can judge if the optical system of this machine suitable for splicing operation or not.

Motor resetting position: the distance that motor left the initial position after switch on or resetting.

Day setup: Set year, month and day.

Clock setup: set hour, minute and second.

Parameter resume: resume all parameters to default value.

Language: Chinese or English.

Records check:

Arc times: arc times of electrode, including arc test, splicing arc, splicing again and manual splicing.

Arc times clear: Recommend to do this operation after changing of electrode.

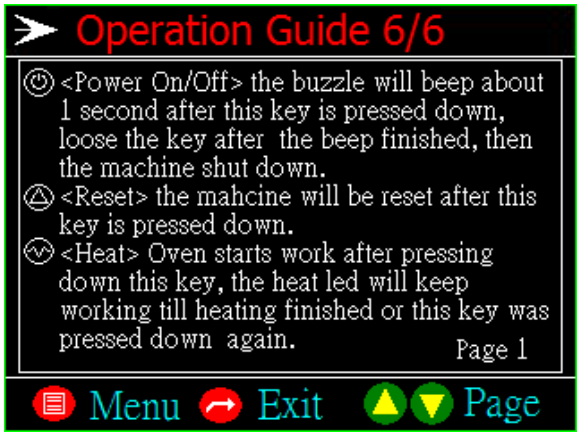
Heat times: working time of heater.

Heat times clear: recommend to do this operation after changing of heater.

Records view: view the operation record of this machine, including splicing time and splicing result. If the splicing loss is 2.55, that means splicing failed.

Records clear: clear all splicing records, maximum records are 10000(0000-9999).

Operation guide:



It is a simple operation guide, red by pressing page-turning key.

§ 5. Switch on, switch off and stand by

Pressing switch will power on the machine

In stand by, pressing switch continuously, machine will buzz, when buzzing stopped, still pressing the switch button, the machine will power off once loosing the switch button. **Stand by:**

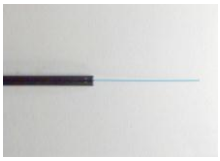
Stand by after power on, and it will show the current day, time and battery capacity and available operation button.

§ 6. Basic procedure of splicing

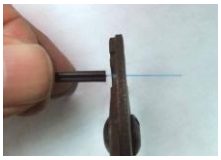
One: Prepare fiber

1. Drop Cable

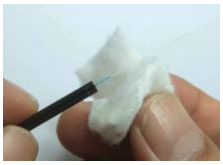
−Place drop cable into stripper to 30mm position and strip drop cable coat by 30mm



−Strip fiber coating by CFS-2 Stripper and retain 3mm

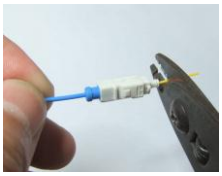


−Clean fiber



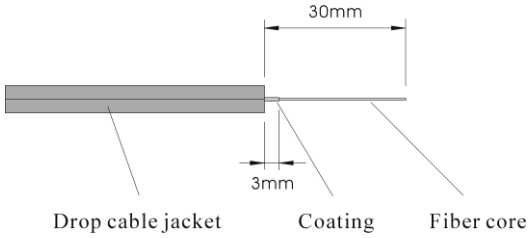
−Place the cleaned drop cable to the drop cable holder

−Please the holder to AD-105H Fiber Cleaver for cut



−Cutting finished

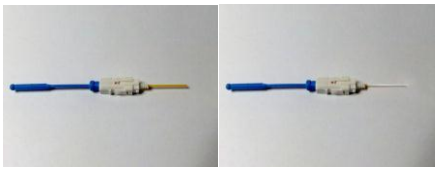
Stripping diagram：



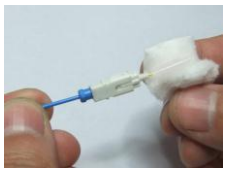
2: Splice-on Connector

A． Connector which need strip

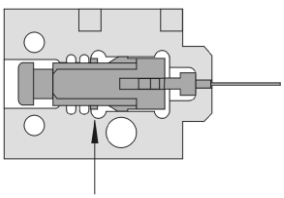
−Strip fiber protective layer by CFS-2 Stripper and retain 1 mm



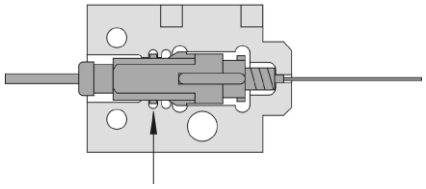
−Clean fiber



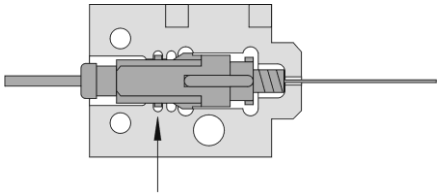
−Place the cleaned fiber to the fiber holder



Place connector locating pin into holder front slot



Place connector locating pin into holder back slot

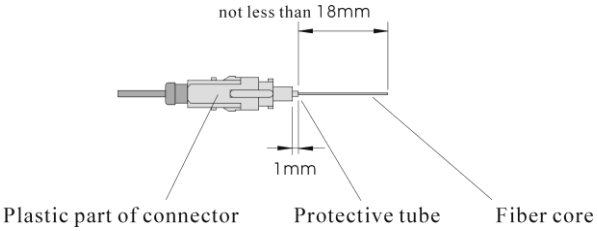


Place connector locating pin into holder back slot

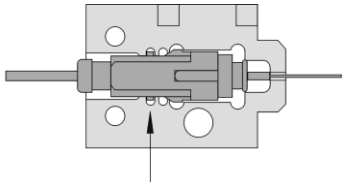
- Place the holder to AD-105H fiber cleaver for cut

- Cut finished

Stripping diagram：

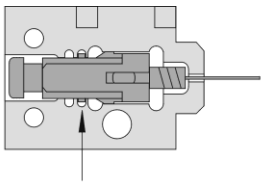


B. Connector which already cut a.



Place connector locating pin into holder back slot

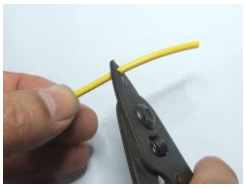
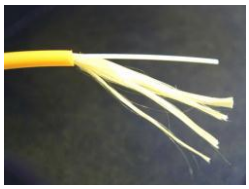
b.



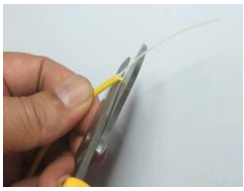
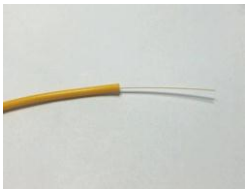
Place connector locating pin into holder mid slot

3. Pigtail

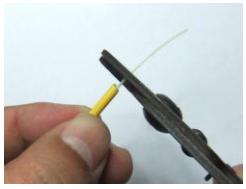
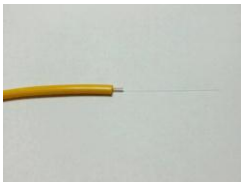
- Strip pigtail jacket by CFS-2 and retain 30mm

-Cut lines

-Strip fiber coating by CFS-2 Stripper and retain 5mm

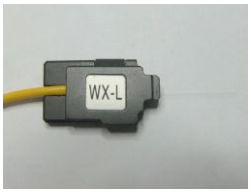



-Clean fiber

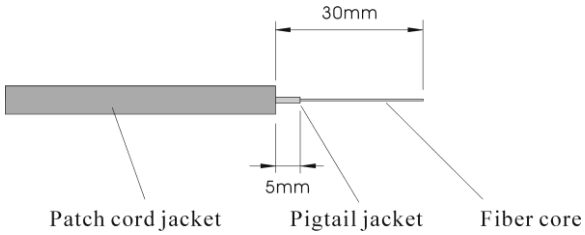
-Place the cleaned fiber to fiber holder


- Place the holder to AD-105H Fiber Cleaver for cut

- Cut finished

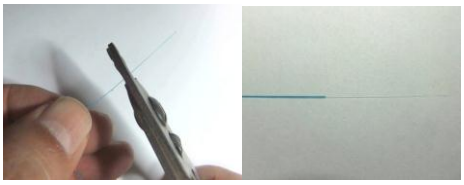


Stripping diagram:



4. Bare Fiber

−Strip fiber by CFS-2 fiber stripper and retain 30mm



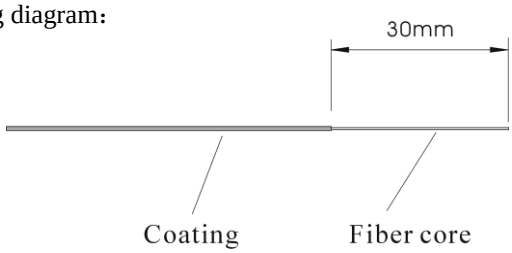
−Clean the fiber

−Place fiber to fiber holder

−Place the fiber holder to AD-105H fiber cleaver for cut

−Cut finished

Stripping diagram：



Two: Place fiber

After fiber cutting, continue the following operations

·Open wind protector, uplift fiber presser foot.

·Place the holder with fiber in side to the holder base, make sure fiber is in V-groove.

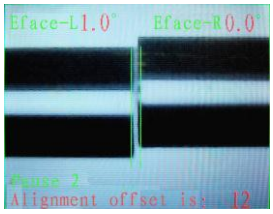
·Put down fiber presser foot softly, and close wind protector.

·Press splicing button

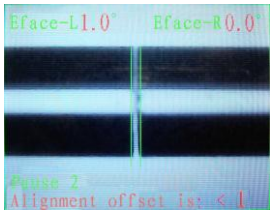
Three: Alignment adjustment

·If fiber core shift bigger than the threshold set, splicer will stop splice and wait for manual adjustment

·Core alignment manually by adjusting the wheel, during adjustment, offset data will keep decreasing, splicer will beep when core alignment succeed



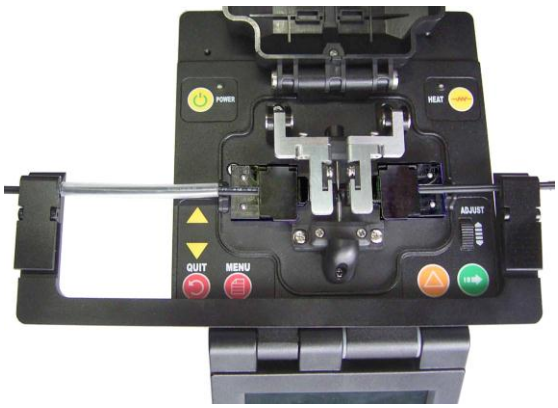
Before adjustment



After adjustment

Four: Heating operation

·Open wind protector, take out spliced fiber.(For drop cable, please use the professional tool to take out the fiber)



·Press reset button for next splicing (If necessary)

·Move the protection sleeve to cover the splicing point

·Put fiber in heater

·Press heating button

·Splicing and heating finish

Need to change the left-side base of the heater if heat drop cable or splice-on connector

§ 7. Charging of Machine

The fusion splicer is equipped with the dedicated charger, other chargers are not allowed.

It can be charged when power on or power off

Red indicator light mean fusion splicer is under charging, green mean charge fully.

§ 8. Standard package and optional

1  Fiber cleaver

2  drop cable stripper

3  Stripper

4  Holder (Multiple)

5  Electrode

6  Cooling tray

7  Charger

8  Fiber take- out tool

9 Instruction Manual

§9. Safety operation Norms

1. Prohibiting to using fusion splicer in the environment with inflammable explosive liquid or gas, otherwise electrode arc may cause fire or explosion.

2. Do not operate machine if there are moisture condense on the machine, otherwise the machine will be damaged.

3. Avoid strong shock or crash, because the mechanical components were precisely adjusted and aligned, otherwise damage will be caused, make sure use the equipped carton to store or transport the machine.

4. Do not use any other chemicals but alcohol to clean lens, V-Groove, holders, LCD monitor etc., otherwise it will cause blurred imaging, dirt, damage, corrosion.

5. Do not touch electrode while fusion splicer is working, otherwise the high pressure and temperature generated by electrode will cause electric shock and burn. Switch off fusion splicer while changing electrodes.

6. Do not dismantle fusion splicer and charger.

7. Only use the equipped charger to charge battery, otherwise may cause damage to fusion splicer and operators.

8. Switch off fusion splicer, in case liquid (water) or other external stuff (screw) entered the machine, otherwise damage to the machine will be caused.

9. Take out fiber carefully after heating finished, do not touch the protection sleeve and heater, since the high temperature will cause burn.

10. Only electrodes supplied by manufacturer can be used.

11. Repair and adjustment can only be operated by the professional technician or engineer, improper repair may cause fir and electric shock.

§ 10. Warnings and cautions for transportation

Avoid strong shock or crash, because fusion splicer is precision instrument and the mechanical components were precisely adjusted and aligned, otherwise damage will be caused, make sure use the equipped carton to store or transport the machine. Do not put fusion splicer in a unstable or unbalanced position, otherwise fusion splicer may be damaged in case the fusion splicer loose balance.

§ 11. Periodical replacement of component.

1、 Replacement of electrode

·Power off fusion splicer

·loss the two screws which fastening the cross-shaped slot

·take out electrode cover and screws

·take out electrode

·Change new electrodes, and put the end face of the plastic top of the electrode on the copper plate.

·Pressing electrode by electrode cover, tighten two screws, there should be a 0.1mm gap between electrode cover and copper plate once screwed, do not make over deformation of the electrode cover.

·Repeat 1~5 to change another electrode.

2、 Replacement of heater

·Switch off fusion splicer, cooling heater to room temperature

·Open left and right plate

·Dismantle two M2.5 screws by allen wrench.

·Take off heater softly and pull off power plug

·Change a new heater, plug the power line

·Tightening heater to fusion splicer panel by two M2.5 screws


POWER
HEAT